WHAT IS CLAIMED IS:

1. An integrated analytical biochip comprising:

a micro reaction tank for containing samples for proceeding to PCR reaction;

plurality of micro channels for separating cloned samples; and

a set of optic fiber structures for detecting signals of samples.

2. The integrated analytical biochip as in claim 1, wherein variations of temperature in said micro reaction tank is controlled by an IC controller.

3. The integrated analytical biochip as in claim 1, wherein said micro reaction tank comprises a micro heater for heating samples, and a micro temperature detector for detecting the temperature of samples in said micro reaction tank.

4. The integrated analytical biochip as in claim 1, wherein said micro heater and said micro temperature detector are formed by an electrical resistance layer.

5. The integrated analytical biochip as in claim 4, wherein said electrical resistance layer is made of Pt/Cr or Pt/Ti.

6. The integrated analytical biochip as in claim 1, wherein said micro reaction tank further comprises an insulating layer for insulating samples from said micro heater and said micro temperature detector to avoid short circuitry, and a conductive layer for electrical connection.

7. The integrated analytical biochip as in claim 6, wherein said insulating layer can be made of polyimide, Teflon or other material with similar functions.

8. The integrated analytical biochip as in claim 6, wherein said conductive

layer can be made of metals such as Au/Cr, Au//Ti, Ag/Cr, Ag/Ti, Al/Cr or Al/Ti.

9. The integrated analytical biochip as in claim 8, wherein the preferable metals for forming said conductive layer is Au/Cr.

10. The integrated analytical biochip as in claim 2, wherein said IC controller comprises a filter for filtering signals outputted from said micro temperature detector so as to lower the value of noise and increase the signal/noise (S/N) ratio, an analog/digital converter (ADC) for converting analog signals to digital signals, and a pulse width modulator (PWM) for reading temperature signals so as to modulate the pulse width of the power source for said micro heater so as to control the temperature.

11. The integrated analytical biochip as in claim 10, wherein said IC controller is controlled via an externally connected operating panel.

12. The integrated analytical biochip as in claim 1, wherein a power supplier is connected for providing the driving voltage of the electro-osmosis flow and power required by said IC controller.

13. The integrated analytical biochip as in claim 2, wherein said IC controller can be integrated on or externally connected to the bottom plate of the biochip.

14. The integrated analytical biochip as in claim 13, wherein said bottom plate of the biochip can be made of glass, quartz or high polymer material.

15. The integrated analytical biochip as in claim 14, wherein said high polymer material can be PMMA, PC or PDMS.

16. The integrated analytical biochip as in claim 1, wherein said fiber structure comprises a pair of optic fiber channels and a pair of fibers.

17. The integrated analytical biochip as in claim 16, wherein said fiber comprises a light source fiber and a detecting fiber.

18. The integrated analytical biochip as in claim 17, wherein said light source

fiber is connected with a light source, and said detecting fiber is connected to a light detector.

19. The integrated analytical biochip as in claim 18, wherein said light source can be laser, Hg lamp, LED or other equipment with similar functions.

20. The integrated analytical biochip as in claim 17, wherein said light source fiber and said detecting fiber can be multi-mode fiber or single-mode fiber.

21. A method for manufacturing integrated analytical biochips comprising steps as follows:

providing a bottom plate;

depositing metal onto said bottom plate as an electrical resistance layer;

depositing metal onto said bottom plate as a conductive layer;

coating an insulating layer on the surfaces of said bottom plate, said electrical resistance layer and said conductive layer;

providing an intermediate plate and a top cover plate;

etching micro channels and optic fiber channels on said intermediate plate and said top cover plate;

drilling holes on specific positions on said intermediate plate and said top cover plate for fluids being led into and brought out;

bonding said intermediate plate and said top cover plate so as to form said micro channels and said fiber channels;

placing fibers into said fiber channels and fixating such; and

combining said bottom plate underneath the said integrated intermediate plate so as to form an integrated analytical biochip.

22. The method for manufacturing integrated analytical biochips as in claim 21,

wherein said top cover plate, said intermediate plate and said bottom plate can be made of glass, quartz or polymer material.

23. The method for manufacturing integrated analytical biochips as in claim 22, wherein said polymer material can be PMMA, PC or PDMS.

24. The method for manufacturing integrated analytical biochips as in claim 21, wherein the method for depositing metals can be either evaporation deposition or sputtering deposition.

25. The method for manufacturing integrated analytical biochips as in claim 21, wherein said electric resistance layer is used as a micro heater, a micro temperature detector and electrodes.

26. The method for manufacturing integrated analytical biochips as in claim 21, wherein the metal forming said electrical resistance layer can be Pt/Cr or Pt/Ti.

27. The method for manufacturing integrated analytical biochips as in claim 21, wherein said electrodes are for the voltage connection to said micro channels to proceed to electrophoresis electro-osmosis.

28. The method for manufacturing integrated analytical biochips as in claim 21, wherein said conductive layer can be made of metals such as Au/Cr, Au//Ti, Ag/Cr, Ag/Ti, Al/Cr or Al/Ti.

29. The method for manufacturing integrated analytical biochips as in claim 21, wherein said insulating layer can be made of polyimide, Teflon, silicon dioxide (SiO_2), silicon nitride (Si_3N_4) or other material with similar functions.

30. The method for manufacturing integrated analytical biochips as in claim 21, wherein the etching method can be wet etching or dry etching.

31. The method for manufacturing integrated analytical biochips as in claim 21, wherein said electrical resistance layer is formed as a micro heater, a micro temperature detector and electrodes.

32. The method for manufacturing integrated analytical biochips as in claim 21,

wherein said fiber can be multi-mode fiber or single-mode fiber.

33. The method for manufacturing integrated analytical biochips as in claim 32, wherein said fiber is preferably a multi-mode fiber.